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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/840,042 | 05/06/2004 | Mark Edwin Forry | 9630 | 7766 |
| 27752 7590 03/07/2007 THE PROCTER & GAMBLE COMPANY INTELLECTUAL PROPERTY DIVISION WINTON HILL BUSINESS CENTER - BOX 161 6110 CENTER HILL AVENUE CINCINNATI, OH 45224 | | | EXAMINER CORDRAY, DENNIS R | |
| | | | ART UNIT 1731 | PAPER NUMBER |
| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE | | |
| 3 MONTHS | 03/07/2007 | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/840,042 | Applicant(s) FORRY ET AL. | |
| | Examiner Dennis Cordray | Art Unit 1731 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 23-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 23-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's amendments and arguments, filed 12/20/2006, have been fully considered but they are only partially persuasive.

The amendments have overcome the rejections over Bouchette et al. Accordingly, the rejections have been withdrawn.

With regard to the rejections over Chen et al, applicant argues on pp 7-9 that Chen et al does not anticipate a structure having a deformation height of at least 1000 μm . Chen et al discloses a base sheet having a deformation height of 0.4 to 0.8 mm, or 400 to 800 μm as a preferred embodiment. Chen et al discloses a more general deformation height of greater than 0.5 mm, or 500 μm (col 14, lines 36-42). Chen et al also discloses the deformation height of an uncalendered and uncreped sheet of greater than 0.5 mm, or 500 μm , with a most preferable range of 0.4 to 1.2 mm, or 400 to 1200 μm (col 31, lines 13-26). Calendering and creping are optional treatments (col 36, lines 30-38) and, in a preferred embodiment, are not used at all (col 29, lines 52-54). Thus base sheets having a deformation height of at least 1200 μm are disclosed in preferred embodiments. With no upper limit to the broader disclosure of greater than 500 μm , the deformation height is only limited by the physical ability of the tissue to stretch without tearing. As disclosed by Kershaw et al (detailed in the prior Office Action), a height of up to 1524 μm is possible and would have been obvious to one of ordinary skill in the art.

With regard to the rejections over Kershaw et al, applicant argues on pp 7-8 that Kershaw fails to teach a wet-laid or air-laid structure. Kershaw et al discloses that samples of the tissues were made by foam forming and by water forming (col 9, lines 4-10). Kershaw et al further defines water forming to include forming on paper machines using water as the carrier in the forming loop in the usual commercial forming configurations, such as twin-wire, Fourdrinier and other well known configurations (col 2, lines 39-49). While wet-laid sheets are not the preferred method of making the tissues of Kershaw et al, a reference is not limited to its preferred embodiment, but must be evaluated for all of its teachings, including its teachings of non-preferred embodiments. *In re Burckel*, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979). Thus, wet-laid webs are disclosed.

2. Applicant's amendments to the claims of the copending application have overcome the statutory type (35 U.S.C. 101) double patenting rejection. Therefore, the rejection has been withdrawn.

3. In addition, upon further consideration, new grounds of rejection are made as detailed below.

Election/Restrictions

4. Applicant's election with traverse of Claims 1-20 and 23-26 in the reply filed on 12/20/2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). By this amendment, the non-elected claims have been cancelled.

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 5-9, 11, 13-14 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al (5990377).

Claims 1 and 5-7: Chen et al discloses a patterned fibrous structure or basesheet (Abs) that comprises a latex either as a hydrophobic material or as an adhesive (col 5, lines 39-41; col 34, line 48 to col 35, line 24, especially col 35, lines 3-21; col 37, line 53 to col 8, line 26, especially col 38, lines 5-26). The latex can be an ethylene-vinyl acetate copolymer, an acrylic polymer or a styrene-butadiene copolymer. Specific commercial products recited include Airflex™ and Nacrylic™, which are recited as suitable latexes on p 8 of the instant Disclosure. The latexes have glass transition temperatures (Tg) in the claimed range (see Swoboda et al, 6740373, col 27, Table 5, where a Tg from -7 to 29 °C is listed for several latex formulations of the above described compositions).

Chen et al discloses that the structure comprises two surfaces, either of both of which can be patterned by deforming the basesheet (Figs 1-3; col 26, lines 34-41). The structure can be wet laid or air laid by standard processes (col 28, lines 55-64; col 29, lines 52-63).

Chen et al discloses the deformation height of an uncalendered and uncreped sheet of greater than 0.5 mm, or 500 μm, with a most preferable range of 0.4 to 1.2 mm, or 400 to 1200 μm (col 31, lines 13-26). Calendering and creping are optional treatments (col 36, lines 30-38) and, in a preferred embodiment, are not used at all (col 29, lines 52-54). Thus base sheets having a deformation height of at least 1200 μm are disclosed in preferred embodiments. With no upper limit to the broader disclosure of greater than 500 μm, the deformation height is only limited by the physical ability of the tissue to stretch without tearing.

Claims 8 and 9: Chen et al discloses that the basesheet has substantially uniform density for good absorption (col 27, lines 38-43). In some embodiments, the structure comprises an underlying fibrous structure that has a pattern of densified regions imparted by embossing or other techniques, thus the structure can have regions of high and low density (col 27, line 54 to col 28, line 3).

Claim 11: In some embodiments, the basesheet has protrusions or deformations extending above and below the plane of the sheet. Thus, both sides are deformed, the depth of deformation for each side being within the claimed range, as discussed above for Claim 1 (col 31, lines 13-26).

Claims 13 and 14: Chen et al discloses the stretch in both cross direction and machine direction of greater than 10% (col 31, lines 30-39). Figure 16 shows the density and basis weight of sheets made. Dividing the basis weight by the density gives the caliper of the sheets (with appropriate unit conversion) from 23.5 to 25 mils.

Claim 17: An absorbent article made using the structure is claimed (col 52, Claim 17). A multi-ply structure is also disclosed (col 36, line 64 to col 37, line 11).

6. Claims 19-20 and 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Schmidt et al (6893525).

Schmidt et al discloses a method for embossing an air-laid absorbent sheet comprising:

- depositing a dry web of fibers on a foraminous support,
- compacting the fiber web,

embossing the compacted web to a depth of up to 125 mils (3175 μm), and bonding the fiber web by applying a binder and curing the binder (Abs; col 3, line 66 to col 4, line 6; col 4, lines 45-60).

Schmidt et al discloses that the binder is typically a latex (col 7, line 44). Schmidt et al also discloses that the step of bonding the web can be carried out prior to the embossing step (col 4, lines 10-11 and 65-67). In this embodiment, the binder is applied, then the web is deformed, followed by curing the binder (col 4, lines 58-67). The process is illustrated in Figure 1, wherein the web is formed on forming wire 12, a binder is applied at spray cabins 42 and 48, the web is dried in dryers 44 and 50, embossing can occur at points B and/or C, and the embossed web is cured at cure oven 52 (col 7, line 17 to col 8, line 16, particularly col 8, lines 14-15). The preferred embossing location is at point A, prior to application of the binder; however, as discussed above in the Response to Arguments, a reference is not limited to its preferred embodiment, but must be evaluated for all of its teachings, including its teachings of non-preferred embodiments.

7. Claims 1, 5 and 11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Koons (3579413).

Claim 1: Koons discloses a corrugated paper, paperboard or cardboard sheet comprising two surfaces, which can be called a first surface and a second surface. The corrugation pattern comprises 30 to 50 flutes per lineal foot, the flutes from 1/10 to 3/16 inch high (2540 to 9525 μm). Liner sheets are bonded to the corrugated sheet by

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means of an adhesive, which can be a rubber latex, at the crests of the corrugations (col 2, lines 65-68; col 3, lines 67-71; col 4, lines 22-26; col 7, lines 40-46 and 59-64). Making the paper, paperboard or cardboard by a wet-laid or air-laid process is not explicitly disclosed; however, it would have been obvious to one of ordinary skill in the art to make the paper or board using a conventional papermaking process such as wet-laying or air-laying. While not explicitly disclosed, it would also have been obvious to one of ordinary skill in the art to apply the adhesive to the crests of the corrugated sheet rather than to coat the linerboard sheets to avoid wasting adhesive. The corrugated sheet comprising adhesive applied to the crests, represents the claimed patterned fibrous structure.

Claim 5: A latex must be either natural or synthetic.

Claim 11: Both sides of the corrugated sheet have the same deformation height.

8. Claims 1, 5, 11, 14, 19-20 and 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kershaw et al (5409572).

Kershaw et al discloses an embossed tissue of high softness having one or both surfaces embossed (Abs; col 1, lines 65-68). The depth of the embossing can be up to 0.06 inch or over (1524 μm) (col 2, lines 18-24). The sheets have a caliper from 0.02 to 0.1 inch (20 to 100 mils) (col 8, lines 4-27). Kershaw et al discloses that samples of the tissues were made by foam forming and by water forming (col 9, lines 4-10). Kershaw et al further defines water forming to include forming on paper machines using water as

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the carrier in the forming loop in the usual commercial forming configurations, such as twin-wire, Fourdrinier and other well known configurations (col 2, lines 41-49). While wet-laid sheets are not the preferred method of making the tissues of Kershaw et al, a reference is not limited to its preferred embodiment, but must be evaluated for all of its teachings, including its teachings of non-preferred embodiments. *In re Burckel*, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979). Thus, wet-laid webs are disclosed. Latex can be included in the sheet as a commonly known and used additive in papermaking processes (col 5, lines 12-20). Thus, a method is disclosed comprising:

providing a wet-laid fibrous structure comprising latex,
subjecting the fibrous structure to a deformation process to form a patterned structure with a surface having a deformation depth of greater than 1000 μm , and
forming a tissue product.

Kershaw et al does not explicitly disclose curing of the latex. However, latex is a well known curable binder and it would have been obvious to one of ordinary skill in the art to cure the binder as a known standard procedure.

9. Claims 10, 12, 15, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al.

Chen et al does not disclose the latex being substantially present in the high density regions of the structure. Chen et al also does not disclose the HFS absorbency or the wet burst strength of the structure. Chen et al further does not disclose the caliper of rolled tissue.

Claim 10: Chen et al discloses multiple-ply structures wherein the layers can be joined by adhesives (col 36, line 64 to col 37, line 11). Figures 2-3 show such structures. It would have been obvious to one of ordinary skill in the art to use the latex already disclosed as an adhesive (col 5, lines 39-41; col 38, lines 1-6) to join the layers together. Where the lower areas of the basesheet joins either another layer or the lower areas of a second inverted basesheet, an area of higher density is created because there is no air pocket, thus the latex adhesive would be concentrated more in the high density areas.

Claims 12 and 15: The structure of Chen et al is substantially identical to the claimed structure. It would have been obvious to one of ordinary skill in the art at the time of the invention to obtain the claimed properties of HFS absorbency and wet burst strength because, where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

Claims 16 and 18: Figures 1-3 and 5-6 show structures of Chan et al that cannot nest. Since the patterned sheets have void spaces beneath the raised portions, it would have been obvious to one of ordinary skill in the art at the time of the invention to obtain a caliper of rolled patterned sheets greater than rolled unpatterned sheets having no void spaces.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Busam et al (US 2005/0100713) discloses a patterned fibrous web comprising latex that has a pattern of deformations up to 3 mm (3000 μ m) in depth.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DRC

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PRIMARY EXAMINER